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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/732,765

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Hans-Dieter Willim

298-215

6970

28249

7590

06/02/2006

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EXAMINER

BRAHAN, THOMAS J

ART UNIT

PAPER NUMBER

3654

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/732,765	Applicant(s) WILLIM, HANS-DIETER	
	Examiner Thomas J. Brahan	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/27/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.

2. Claims 1-27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example:

- a. Claim 1, line 15, refers to "one telescopic section" without specifying that this is one of the sections already included in the claims, as to be redundantly adding another section into the claimed combination of element. Note that the reference numeral (5) after this term cannot be relied upon overcome an otherwise indefinite claim limitation.
- b. Claim 3, line 13, refers to "an internal telescopic section" without specifying that this is one of said sections already recited in the claims, as to be redundantly adding another section into the claimed combination of element. Again, the reference numeral (8) after this term cannot be relied upon overcome the indefiniteness of a this limitation. Also at line 4 of claim 3, "an external telescopic section" is added into the claimed combination of elements without specifying that this is one of the sections already recited in the claims.
- c. Claim 4 adds a "middle section" which is probably another telescopic section, without specifying that it is one of said sections already recited in the claims.
- d. Claim 5 discusses a telescopic section as being an immediately adjacent section without referring to is as one of earlier included telescopic sections.
- e. In claim 5 it is unclear as to what is considered as being "held directly".
- f. Claim 9 refers to "several sections (5,6) that can telescope into one another" without identifying it as one of sections of claim 1, line 4; reference numerals cannot be used to overcome inconsistent claim terms.
- g. Claim 14 adds an innermost telescopic section into the claimed combination without identifying it as one of sections of claim 1, line 4.
- h. Claim 16 adds a first telescopic section into the claimed combination without identifying it as one of sections of claim 1, line 4.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 6 and 23, as understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by Higgins. Higgins shows a telescopic boom of a crane comprising:

a pivot section (base boom section 12) structured and arranged to be pivoted up or down on a horizontal luffing axle (at its lower end),

telescopic sections (intermediate boom section 14 and tip boom section 16) concentrically arranged to telescope out of the pivot section (12),

a guying (pendant support system 60) having at least one guy stand (mast 72) structured and arranged to pivot on either the pivot section (12; directly pivoted thereon) or one telescopic section (14 and 16; indirectly pivoted thereon) of the concentric pivoting and telescopic sections (14 and 16),

at least one guy cable (21) structured and arranged to be supported by the guy stand (72), and erection mechanism for raising the guy stand (72) out of folded transportation position (see Figure 20) into fully-raised and extended operating position (see figure 22),

wherein the erection mechanism comprises a tension rod (66) structured and arranged to terminate at an outer extended end of the guy stand (72) remote from the pivot section (12) or one telescopic section (indirectly) and connect the guy stand (72) with a telescopic section (16) internally adjacent (note the term adjacent is relative) the pivot section (12) or one telescopic section (14) on which the guy stand (72) is structured and arranged to pivot.

The fully-opened and extended position of the guy stand (mast 72) has it at an angle, as shown in figure 22 to the a cross-sectional plane perpendicular to the longitudinal axis of the boom, and in this position the rope (21) would be pulling down on the mast (72) as to be inducing a tractive force on the tension rod (66), as recited in claim 2. Note that if drawing figure 22 cannot be relied upon to show an angle between the guy stand and the cross-sectional plane perpendicular to the longitudinal axis of the boom, that the reference states that the crane is used without of all of the boom sections extended, see the last lines of column 11, as to have various "fully-opened" positions for the guy stand. Tension rod (66) is a telescopic pipe as to be adjustable in length, as recited in claims 6 and 23.

6. Claims 1, 2 and 4, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hamme in view of Stallbaumer et al. Hamme shows the basic claimed telescopic boom of a crane comprising:

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a pivot section (hinge section 4) structured and arranged to be pivoted up or down on a horizontal luffing axle (axis 5),

telescopic sections (telescopes 6-9) concentrically arranged to telescope out of the pivot section (4),

a guying having at least one guy stand (guy pole 14) structured and arranged to pivot on the pivot section (4),

at least one guy cable (guy rope 18) structured and arranged to be supported by the guy stand (14), and

an erection mechanism (piston cylinder unit 15) for raising the guy stand (14) out of a folded transportation position into fully-raised and extended operating position

Hamme varies from the claims by having a piston cylinder unit erection mechanism instead of a tension rod system. Stallbaumer et al shows a similar telescopic boom with a mast (96) that can be moved to it erected position by tension rods (132 and 134; see figures 6 and 7) or by a piston cylinder unit (178; see figure 11) as to have these two types of erection mechanisms as art recognized equivalents. It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Hamme by substituting a tension rod erection mechanism for the piston cylinder unit, as these are art recognized equivalents, as taught by Stallbaumer et al. Stallbaumer et al has the guy stand at an angle to the cross-sectional plane perpendicular to the longitudinal axis of the boom, as to induce tractive forces on the tension rods, as recited in claim 2.

7. Claims 1-3, 15, and 21, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al. Becker shows the basic claimed telescopic boom of a crane comprising:

a pivot section (base box 4) structured and arranged to be pivoted up or down on a horizontal luffing axle (pivot 5),

telescopic sections (boom sections 20, 21, 23) concentrically arranged to telescope out of the pivot section (4),

a guying having at least one guy stand (guying yoke 11) structured and arranged to pivot on the pivot section (4),

at least one guy cable (guying rope 28) structured and arranged to be supported by the guy stand (11), and

an erection mechanism (hydraulic cylinder 16) for raising the guy stand (14) out of a folded transportation position into fully-raised and extended operating position.

Becker varies from the claims by having a hydraulic cylinder erection mechanism instead of a tension rod system. Stallbaumer et al shows a similar telescopic boom with a mast (96) that can be moved to it erected position by tension rods (132 and 134; see figures 6 and 7) or by a piston cylinder unit

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(178; see figure 11) as to have these two types of erection mechanisms as art recognized equivalents. It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker by substituting a tension rod erection mechanism for the piston cylinder unit, as these are art recognized equivalents, as taught by Stallbaumer et al. Stallbaumer et al has the guy stand at an angle to the cross-sectional plane perpendicular to the longitudinal axis of the boom, as to induce tractive forces on the tension rods, as recited in claim 2. The guy cable (28) runs unattached over the guy stand (11) from an attachment point (26) on the pivot section (4), as claim 3 is best understood, and as recited in claim 15. The boom head (24) is considered as a collar for the guy cable, as recited in claim 21.

8. Claims 1, 2, 7, 8 and 24, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over DE 200 02 748 (cited by applicant) in view of Stallbaumer et al. DE '748 shows the basic claimed telescopic boom comprising a lower pivot section with telescopic sections, a guying having at least one guy stand (5) pivoted to the upper end of the pivot section, a guy cable (9) extending to a telescopic section and an erection mechanism (hydraulic cylinder) for raising the guy stand (5) DE '748 varies from the claims by having a hydraulic cylinder erection mechanism instead of a tension rod system. Stallbaumer et al shows a similar telescopic boom with a mast (96) that can be moved to it erected position by tension rods (132 and 134; see figures 6 and 7) or by a piston cylinder unit (178; see figure 11) as to have these two types of erection mechanisms as art recognized equivalents. It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of DE '748 by substituting a tension rod erection mechanism for the piston cylinder unit, as these are art recognized equivalents, as taught by Stallbaumer et al. Stallbaumer et al has the guy stand at an angle to the cross-sectional plane perpendicular to the longitudinal axis of the boom, as to induce tractive forces on the tension rods, as recited in claim 2. DE '748 has two guy stands with individual guy cables, as recited in claim 7. The guy stand (5) is telescopic, as recited in claims 8 and 24.

9. Claim 5, as understood, is rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al, as applied above to claims 1-3, and further in view of Reifenscheid et al. Becker, as modified, shows the basic claimed telescopic boom and guy rigging, but varies from the claims as the tension rods of Stallbaumer et al are shown as mounted to a bracket (136), not to a collar. Reifenscheid et al shows a similar rod (32) mounted to a boom by a collar (27). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker providing its with tension rods with collar mountings, as to have a strong reinforced mount, as taught by Reifenscheid et al.

10. Claims 6 and 23, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable

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over Becker in view of Stallbaumer et al, as applied above to claim 1, and further in view of Sterner et al. Becker, as modified, shows the basic claimed telescopic boom and guy rigging, but varies from the claims as the tension rods of Stallbaumer et al have sliding end connections, not telescopic portions. Sterner et al shows a crane boom with telescopic tension rods (58). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker having its tension rods telescopic instead of mounted with sliding end connection, as to have a compact stored position, as taught by Sterner et al.

11. Claim 9, as understood, is rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al, as applied above to claim 1, and further in view of Kishi. Becker, as modified, shows the basic claimed telescopic boom and guy rigging, but varies from claim 9 by not having two guy stands which are mounted to different boom sections. Kishi shows a similar rigging system with guying arrangements (17, 18 and 19) each on different boom sections. It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker arranging it with plural guy stands on different boom sections, to support the boom at several locations spaced longitudinally along the telescopic boom, as taught by Kishi.

12. Claim 4 and 22, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al and Kishi, as applied above to claim 9, and further in view of Higgins. Becker, as modified, shows the basic claimed telescopic boom guy rigging with plural guy stands on plural boom sections, as to have a guy stand on whatever section applicant is considering as the "middle" section of claim 4. It varies from the claims by not using collars to mount the guy stands to their boom section. Higgins shows a similar telescopic boom guying arrangement with the guy stands mounted on a collar (32). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker by providing its with guy stands with collar mountings, as to have a strong mount, as taught by Higgins.

13. Claims 10-14, 25 and 26, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al, as applied above to claim 1, and further in view of McGinnis. Becker, as modified, shows the basic claimed telescopic boom and guy rigging, but varies from the claims by not having a hooking device at the cable storage drum (6). McGinnis shows a guying drum with a cable drive (64) which receive beads (66) on the cable (42). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the guying cable and the guying drum of Becker et al by providing the cable with beads, and the drum with a bead drive system, to positively drive and to positively hold the guying line in place, as taught by McGinnis. The method of attaching the beads, pressing them on, as recited in claim 26, would have been an obvious

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design expedient, within the level of routine skill in the art at the time the invention was made by applicant.

14. Claims 10-13, 25 and 27, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hamme in view of Stallbaumer et al, as applied above to claim 1, and further in view of Conrad et al. Hamme, as modified, shows the basic claimed telescopic boom and guy rigging with a storage device (16) on the guy stand (14). It varies from the claims by not having the storage device drawing out the guy cable with a hooks and eyes. Conrad et al shows a guy stand with a guy storage device with hooks (15) and eyes (14) and locking means (22). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the guying cable and the guying drum of Hamme by using a guy storage device which extends the guy cable from the storage device in hooked and eyed segments, to match the guy length to the boom section being extended, as taught by Conrad et al. The eyes of Conrad et al are considered as thickened pieces, as recited in claims 11 and 25, and are moved by a drive, as recited in claim 12. The storage device is on the guy stand which is on the pivot section, as recited in claim 13. Conrad et al includes hydraulic cylinders (25) as recited in claim 27.

15. Claims 16, 17, 19 and 20, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al and Kishi, as applied above to claim 9, and further in view of Reifenscheid et al. Becker, as modified, shows the basic claimed telescopic boom guy rigging with plural guy stands, tension rods and boom sections. It varies from the claims as the tension rods of Stallbaumer et al are shown as mounted to a bracket (136), not to a collar. Reifenscheid et al shows a similar rod (32) mounted to a boom by a collar (27). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker providing its with tension rods with collar mountings, as to have a strong reinforced mount, as taught by Reifenscheid et al.

16. Claim 18, as understood, is rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al and Kishi, as applied above to claim 9, and further in view of Higgins. Becker, as modified, shows the basic claimed telescopic boom guy rigging with plural guy stands, tension rods and boom sections. It varies from the claims as the guy stands are not mounted on a collar. Higgins shows a similar guy stand mounted with a collar (32). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker providing its with guy stands with collar mountings, as to have a strong reinforced mount, as taught by Higgins.

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17. Claims 19 and 20, as understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becker in view of Stallbaumer et al and Kishi, as applied above to claim 9, and further in view of Reifenscheid et al. Becker, as modified, shows the basic claimed telescopic boom and with plural guy stands. It varies from the claims as the tension rods of Stallbaumer et al are shown as mounted to a bracket (136), not to a collar. Reifenscheid et al shows a shows a similar rod (32) mounted to the boom by a collar (27). It would have been obvious to one of ordinary skill in the art at the time the invention was made by applicant to modify the telescopic boom of Becker providing its with tension rods with collar mountings, as to have a strong reinforced mount, as taught by Reifenscheid et al.

18. Irsh et al is cited as showing a related guying system.

19. Applicant argues in the amendment filed February 27, 2006, that the Higgins is not an anticipation as it does not disclose a guy cable, as cable 21 is designed to lift and lower the load hook. However the cable 21 of Higgins reads on the structure recited for the cable in claim 1, as it is structured and arranged to be supported by the guy stand. When under load it is tensioned, as to behave as a guy cable to some degree. It has the minimal structure recited in the claim. The remaining remarks have been fully considered, but are deemed moot in view of the above new rejections. The amendment necessitated the new grounds, accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. An inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Brahan whose telephone number is (571) 272-6921. The examiner's supervisor, Ms. Katherine Matecki, can be reached at (571) 272-6951.

21. The new fax number for all patent applications is (571) 273-8300.

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Questions regarding access to the Private PAIR system, should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Handwritten signature of Thomas J. Brahan and the date 5/30/06.

Thomas J. Brahan
Primary Examiner
Art Unit 3654